

7. *PTERNISTES RUFOPICTUS*.

Pternistes rufopictus, Reich. J. f. O. 1887, p. 52.

Hab. Central East Africa : Wembaere, Victoria Nyanza.

8. *PTERNISTES LEUCOSCEPUS*.

Perdix rubricollis, Cretzsch. (*nec* Gmel.) Rüpp. Atl. p. 44, pl. 30 (1826) [figure resembles *P. infuscatus*].

Pternistes rubricollis, Gray, List Gall. B. iii. p. 32 (1844).

Francolinus rubricollis, Gray, Gen. B. iii. p. 506 (1846) [part].

Pternistes asiatica, Licht. Nomencl. Av. p. 84 (1854).

Francolinus leucoscepus, Gray, List Birds, pt. v. Gall. p. 48 (1867).

Lichtenstein's name (*asiaticus*), so far as priority goes, should stand for this species ; but as the name is misleading, and there was no description, I have determined to adopt the later name (*leucoscepus*) of G. R. Gray.

Hab. North-east Africa : Massowah, Bogos, Abyssinia, Somali.

9. *PTERNISTES INFUSCATUS*.

Pternistes rubricollis, Rüpp. N.O.-Afr. p. 106 (1845) ; Reich. J. f. O. 1891, p. 143.

Pternistes infuscatus, Cabanis, J. f. O. 1868, p. 413 ; Cabanis, v. d. Decken's Reis. iii. p. 44, pl. 14 (1869).

Pternistes clappertoni, Shelley, Ibis, 1888, p. 295.

Hab. East Africa : from Mamboio northwards to Kilimanjaro and Taveta.

III.—*Some further Notes on the Periods occupied by Birds in the Incubation of their Eggs.* By WILLIAM EVANS, F.R.S.E.

SINCE my paper on Incubation appeared in 'The Ibis' for January last (1890, p. 52), some additional information has been collected which it may be well now to bring under the notice of those interested in the subject.

In W. J. Broderip's 'Leaves from the Note-book of a Naturalist,' 1852 (p. 14), the period of incubation in the case

of the Condor (*Sarcorhamphus gryphus*) is stated to be 54 days—an interesting record for the knowledge of which I am indebted to Professor Newton. In the ‘*Encyclopædia Britannica*’ (9th ed. vi. p. 253) the period assigned to this bird is seven weeks, which does not differ very materially from that given by Broderip.

The ‘*Zoologist*’ for 1881 (p. 106) contains what appears to be a reliable record of the hatching of three eggs of the Common Buzzard (*Buteo vulgaris*) by a tame bird of the same species. Incubation is said to have lasted 31 days.

From Dr. Giglioli’s ‘*Primo Resoconto dei Risultati della Inchiesta Ornitologica in Italia*,’ to which Messrs. Eagle Clarke and Harvie-Brown have kindly drawn my attention, it appears that the duration of incubation was one of the points upon which the army of observers who make returns to the “*Ufficio Ornitologico*” were asked to report. This elicited from several of the observers a series of statements which will be found in their reports, as recently published by the Italian Government in the second part of the above-mentioned work. A careful analysis of these statements and a comparison of them with ascertained facts shake my confidence in the accuracy of the bulk of them, and make me doubt whether, as a whole, they are of any real value. What seem to me to be manifest inconsistencies and contradictions present themselves at every turn. For instance, according to the table (p. 13) furnished by one observer, the period is the same, namely 16 to 18 days, for the Siskin, the Tawny Owl, the Stone Curlew, &c. Another observer gives (p. 187) 8 days for the Cirl Bunting and 10 for the Larks; while a third tells us (p. 354) that Larks, Finches, and Buntings incubate 15 to 20 days. At p. 190 the Land Rail’s period is set down at 12 days, and on p. 228 at 20–22 days. In the case of several of the Partridges, the Black Grouse, and the Ptarmigan, incubation is said to last from 18 to 20 days, an understatement, as it seems to me, of about 5 days. Again, is it possible that eggs of the Bearded Vulture (*Gypaëtus barbatus*) can be hatched in “about 20 days” (pt. 1, p. 420.)? Many other difficulties might be pointed

out, but I invite those interested in the subject to consult the volumes for themselves and to draw their own conclusions. It is a pity the methods employed to ascertain the duration of incubation are not explained.

The following Table contains the results of some further experiments made by me during the summer of last year on the same lines as in 1889 and 1890.

Species.	Period.	Means employed.	Number of eggs hatched.
<i>Turdus merula</i> (Blackbird.)	15th day.	Incubator.	1
<i>Ruticilla phœnicurus</i> (Redstart.)	14th day. 14 days from laying of last egg.	do. Nest watched.	1
<i>Erithacus rubecula</i> (Redbreast.)	13 to 14 days.	Incubator.	2
<i>Acrocephalus phragmitis</i> . . (Sedge Warbler.)	15th day.	do.	1
<i>Parus major</i> (Great Tit.)	14th day (end of).	do.	1
<i>Motacilla lugubris</i> (Pied Wagtail.)	14th day (middle of).	do.	2
<i>Hirundo rustica</i> (Swallow.)	15th day (2nd half of).	Hedge-Sparrow.	1
<i>Alauda arvensis</i> (Sky-Lark.)	13 to 14 days.	Incubator.	2
<i>Sterna fluvialis</i> (Common Tern.)	21 days (almost exactly.) 22nd day (1st half of). 21st day (2nd half of).	} do.	3
<i>Totanus calidris</i> (Redshank.)	23rd day.		
<i>Procellaria pelagica</i> (Storm Petrel.)	36th day (1st half of).	do.	1

In my former paper the opinion was expressed (p. 89) that the period in the case of the Redshank had been understated by previous writers, a view which the above-mentioned incubator-period fully sustains.

Half a dozen eggs of the Storm Petrel, kindly procured for me by Messrs. Harvie-Brown and Eagle Clarke during their cruise among the Hebrides last summer, were placed in the incubator on 5th July, and it was with peculiar interest

that I watched their progress till the 31st, when I had to leave home. Before leaving I tested the eggs at light and in water, and was satisfied that five of them not only contained living embryos, but that they were several days from hatching. In my absence Mr. Eagle Clarke kindly continued the daily observations, and was able to report that early on the 33rd day two of the chicks had chipped their shells. Only one of them, however, lived to hatch out. This took place three days later, or after an incubation of fully 35 days, in a temperature of from 102° to 103° Fahr. Considering the size of the egg, and still more of the bird itself, this is a remarkably long period of incubation, but, though fully a week more than the imperfect observation made for me in Shetland in 1889 led me to expect, I see no reason to suppose that it was abnormally prolonged. The fact that, although only one egg was hatched, two were chipped at *precisely* the same time, is of considerable importance, and practically doubles the weight of the observation. Possibly under purely natural conditions the interval between chipping and hatching may, as a rule, be less than three days, and therefore from 33 to 35 days would perhaps be a very fair general conclusion to draw from these observations regarding the duration of incubation in this small Petrel. Reliable information regarding the period of incubation in allied species, such as the Manx Shearwater and the Fulmar, will now be looked forward to with more interest than ever.

We have yet a great deal to learn before we can dogmatize on this subject, but I think my observations warrant the general conclusions which I indicated at the close of my paper, namely (1) that each well-defined natural group of birds has a characteristic period of incubation; and (2) that within each group the larger the egg the longer the period. Within each group, however, the range of duration is apparently slight, as compared with the differences in the size of the eggs.

IV.—*A few Remarks on Mr. Oates's 'Birds of British India.'* By W. E. BROOKS.

EVERYONE who has consulted Mr. Oates's volumes on the Birds of British India must be delighted with this excellent and very useful work. There are, however, a few corrections which I should like to make, as the results of my own observations.

Vol. I. p. 17.—The Himalayan Crow, *Corvus intermedius*, Adams, is united with the large Crow of the plains, *C. macrorhynchus*, Wagler, formerly known as *C. culminatus*. This is wrong, for the hill bird has a hoarse Raven-like voice, while that of the plains bird is a clear-toned note: there is quite as much difference in their notes as there is between bass and tenor of the human voice. I found, too, that the tail of the hill species, as a rule, exceeded in length that of the plains bird. Crows do not vary much in size, and not at all in colour when wholly black; but this extreme difference in voice entirely forbids, I think, the union of the two species. And is there no difference in form of bill? I think there is.

Vol. I. pp. 344–345.—The difference between the two Goldcrests consists in the lighter coloration of *Regulus himalayensis* and the grey colour about the neck, which I have not observed in *R. cristatus*. In this respect the Himalayan species is more like the North-American *R. satrapa*. I am inclined to think the Japanese species may prove identical with the Himalayan one, but have not the means for comparison. I would keep *Regulus himalayensis*, Blyth, distinct from *R. cristatus*, with which it does not altogether agree.

Vol. I. p. 393. *Hypolais caligata*.—This bird was confounded in collections with *H. rama*. Looking over my collection, Dr. Jerdon suggested that the smaller birds were distinct; and this led me to procure large series of both species, from which it resulted that when freshly moulted *H. rama* is a sort of pale greyish or mouse-brown, while *H. caligata* is a warm rufous-brown, like *Acrocephalus agricola*. I refer to the upper surface of the birds. In a short time the bright sun changes both birds to much the same

tone. This shows that, where there is close affinity, freshly moulted examples are valuable in determining a species. *H. caligata* has notes, too, that I did not hear from *H. rama*. The habits of the two species differ somewhat; for while *H. rama* will mostly be found in the babool bushes or trees, *H. caligata* prefers a cotton-field; and in the cotton-fields I procured most of my examples.

Vol. I. p. 406. *Phylloscopus neglectus* and *P. sindianus*.—*P. neglectus* can hardly be called a *Phylloscopus* at all; in structure of bill, notes, and habits it is more like *Sylvia* (a Whitethroat), while *P. sindianus* is a typical *Phylloscopus* in every respect. The note is a true "tisyip," as Blyth terms it, and in size and general appearance the only bird with which it is likely to be confounded is *P. tristis*; but it wants the green and the yellow of *P. tristis*. The call-notes are also quite different—shrill, faint, and sibilant in *P. tristis*, and loud, clear, and Willow-Wren-like in *P. sindianus*; only the call of the latter is very much louder than that of the English Willow Wren, and no small bird can be heard a greater distance than *P. sindianus*. Its loud clear call is simply astonishing. It being winter-time when I procured it, I never heard its song. It and *P. tristis* were both quite common in the tamarisk bushes near Sukur, and so was *P. neglectus*; so that I had ample opportunities of comparing the three.

Vol. I. p. 425. *Cryptolopha xanthoschista*.—I would separate the North-west bird as *C. albosuperciliaris*, Blyth. These two are of the same size, but the fine dark blue tone of the Eastern bird forbids its identification with the North-west pale ashy-brown bird. The two species are very correctly shown in the plate (xx.) of 'Lahore to Yarkand.'

Vol. II. p. 61. *Pratincola maura*.—I cannot believe that the small *P. indica*, which breeds plentifully in the Himalayas, is identical with the much larger bird, more resembling in coloration *P. rubicola* of Europe.

In the North-west Himalayas, I met only with the small species. I believe there are two species at least. As well as I remember, the larger bird is more eastern. Placing a typical specimen of the small species (*P. indica*) alongside

one of the large examples on which Canon Tristram founded his *P. robusta*, identity is quite out of the question ; not only have we an immense difference in size, but the style of coloration is quite different.

Vol. II. p. 312. *Anthus spinoletta*.—I would keep *A. blakistoni*, Swinhoe, distinct. It is smaller, and in winter plumage has well-defined small breast-spots, as opposed to the larger and more cloudy ones of the European bird. A difference of .3 in the length of wing precludes identity.

Vol. II. p. 324. *Alauda arvensis*.—The large Lark of the Punjab is certainly not *A. arvensis*, and *A. dulcivox*, Hodg., should be kept distinct. My intermediate-sized Lark, *A. guttata* of the Cashmere valley, is distinct from both—a smaller bird, though much larger than *A. gulgula* ; and it has one peculiarity—when newly moulted, the reddish parts of the plumage are a *dull purple-brown*, as opposed to the bright rufous of *A. gulgula*. Towards winter-time, and in spring, the Larks weather to the one sandy light tone, and comparisons as to supposed identity should be made just after the moult : at this time only can safe work be done. Unlike other genera, the voice in true *Alauda* is much the same in every species that I have met with (let me here observe I have never seen the Wood-Lark in life), so that the voice is no help in separating them. Clearly there are several species of *Alauda*, and the points of difference are not yet determined, perhaps never will be, for there is not such a difficult group to be found anywhere. Some of the Eastern Himalayan birds are intensely red, and quite different from the Mountain Sky-Larks of the North-west. Carefully collected examples of all the Indian Sky-Larks, just after the autumnal moult and properly sexed and measured, with soft parts accurately noted, would throw some light on the subject ; and the same is the case with regard to the Sky-Larks of China and other parts of Asia.

Vol. II. p. 326. *Alauda gulgula*.—To the synonyms should be added *A. calivox*, Swinhoe, but from them must be deducted my *A. australis*. The type of the latter is in the Calcutta Museum, and it is quite impossible to unite that

fine Lark with the little *A. gulgula*. This southern Lark must be kept distinct for the present at least. As well as I can remember, the type was procured in the Nilghiri Hills.

The bill and feet of *A. dulcivox* differ from those of *A. arvensis*. The former has also the longest wing. Swinhoe's *A. pekinensis* appeared to me to be much more like true *A. arvensis*.

V.—*Description of a new Species of Wren from North-east India, together with an Account of its Nest and Eggs.* By E. C. STEWART BAKER, District Superintendent of Police, North Cachar.

(Plate II.)

I HAVE recently obtained in Northern Cachar an example of a Wren which I believe to be new to science, and propose to characterize as

ELACHURA HAPLONOTA, sp. n. (Plate II.)

Similis *E. punctata*, sed supra concolor, minimè albo-punctata, dorsi punctis albis nullis, et remigibus caudaque unicoloribus nec nigro transfasciatis distinguenda.

Description.—Whole upper plumage and wing-coverts dark umber-brown, rather lighter on the rump and tail-coverts, the feathers obsoletely edged with rather pale sienna-brown; wings dark cinnamon-brown on the exposed parts, and dark-brown where unexposed (in the closed wing); tail brown, tinged with cinnamon-red, but not so strongly as are the wing-quills; lores fulvous-brown, dusky next the axis; chin and throat white, tinged with fulvous, and the feathers, except in the centre, tipped with dusky; breast and sides of neck fulvous-brown, the feathers tipped with brown and subtipped with white, the white being most prominent in the centre of the breast; centre of abdomen and belly white; flanks and under tail-coverts fulvous-brown, some of the feathers of the former tipped with white; thighs greyish brown, the feathers with the shafts slightly paler; under wing-coverts grey; axillaries dark fulvous-brown.